What is claimed is:

1. A pharmaceutical composition comprising a nanoparticle and any one of a peptide, a polysaccharide, or a glycoprotein, attached electrostatically thereto, and a pharmaceutically acceptable carrier.

2. The pharmaceutical composition of claim 1, wherein the nanoparticle comprises an organic wax having a melting point from 40°C to 60°C.

3. The pharmaceutical composition of claim 2, wherein the organic wax is stearic acid; atomized glyceryl palmitostearate; atomized glyceryl behenate; a paraffin wax having a melting point from 40° C to 60° C; a mixture of mono-, di-, and tri-glycerides obtained by esterification of fatty acids of natural origin with glycerol and having a melting point from 40° C to 60° C; a mixture of mono-, di-, and tri-glycerides obtained by transesterification of fatty acids of natural origin and having a melting point from 40° C to 60° C; or a mixture of mono-, di-, and tri-glycerides of C12-C18 fatty acids and having a melting point from 40° C to 60° C.

4. The pharmaceutical composition of claim 2, wherein the organic wax is admixed with a nonionic surfactant.

5. The pharmaceutical composition of claim 4, wherein the admixture of organic wax and non-ionic surfactant is cetyl alcohol with polysorbate 60, polyoxyl 2 stearyl ether with polysorbate 80, or mono-, di-, and tri-glycerides with free polyethylene glycol and with mono-, and di-fatty acid esters of polyethylene glycol.

6. The pharmaceutical composition of claim 1, wherein the nanoparticle comprises an ionic surface-active agent.

7. The pharmaceutical composition of claim 6, wherein the surface-active agent has a charged head and a hydrophobic tail.

8. The pharmaceutical composition of claim 7, wherein the surface-active agent is an anionic surfactant.

9. The pharmaceutical composition of claim 8, wherein the anionic surfactant is sodium lauryl sulfate, sodium cholate, sodium taurocholate, or sodium docusate.

10. The pharmaceutical composition of claim 9, wherein the surface-active agent is sodium docusate.

11. The pharmaceutical composition of any one of claims 1-10, wherein the peptide, the polysaccharide, or the glycoprotein has a net positive charge and the nanoparticle has a net negative charge, such that the peptide, the polysaccharide, or the glycoprotein is electrostatically attached to the nanoparticle.

12. The pharmaceutical composition of claim 11, wherein the peptide is attached to the nanoparticle, the peptide having more combined total lysine plus arginine groups than the combined total of aspartic acid plus glutamic acid groups.

13. The pharmaceutical composition of claim 11, wherein the peptide is glatiramer acetate.

14. The pharmaceutical composition of claim 11, wherein the peptide is interferon.

15. The pharmaceutical composition of claim 11, wherein the polysaccharide is attached to the nanoparticle, the polysaccharide being gentamycin, amikacin or tobramysin.

16. The pharmaceutical composition of claim 7, wherein the surface-active agent is a cationic surfactant.

17. The pharmaceutical composition of claim 16, wherein the cationic surfactant is cetyltrimethylammonium bromide, chlorhexidine salts, hexadecyl triammonium bromide, dodecyl ammonium chloride or an alkylpyridinium salt.

18. The pharmaceutical composition of any one of claims 1-7 or 16-17, wherein the peptide, the polysaccharide, or the glycoprotein has a net negative charge and the nanoparticle has a net positive charge, such that the peptide, the polysacharide, or the glycoprotein is electrostatically attached to the nanoparticle.

19. The pharmaceutical composition of claim 18, wherein the peptide is attached to the nanoparticle, the peptide having more combined total aspartic acid plus glutamic acid groups than lysine plus arginine groups.

20. The pharmaceutical composition of claim 18, wherein the polysaccharide is attached to the nanoparticle, the polysaccharide being heparin.

21. The pharmaceutical composition of any one of claims 1-20, characterized in that the rate of enzymatic

degradation of the peptide, the polysaccharide, or the glycoprotein when electrostatically attached to the nanoparticle is lower than the rate of enzymatic degradation of the peptide, the polysaccharide, or the glycoprotein when unattached to the nanoparticle in solution.

22. A pharmaceutical composition comprising nanoparticles of i) an admixture of mono-, di-, and tri-glycerides with free polyethylene glycol and with mono-, and di-fatty acid esters of polyethylene glycol, ii) sodium docusate, and iii) glatiramer acetate.

23. The pharmaceutical composition of claim 22, wherein the admixture comprises 60-90% by weight of the composition, wherein the sodium docusate comprises 2-30% by weight of the composition, and wherein the glatiramer acetate comprises 3-20% of the composition.

24. The pharmaceutical composition of claim 23, wherein the admixture comprises 80-85% by weight of the composition, wherein the sodium docusate comprises 5-7% by weight of the composition, and wherein the glatiramer acetate comprises 8-15% of the composition.

25. The pharmaceutical composition of any one of claims 22-24, wherein the admixture comprises 20% mono-, di-, and tri-glycerides, 8% free polyethylene glycol, and 72% mono-, and di-fatty acid esters of polyethylene glycol.

26. The pharmaceutical composition of any one of claims 22-25, characterized in that the rate of enzymatic degradation of the glatiramer acetate when electrostatically attached to the nanoparticle is lower

than the rate of enzymatic degradation of the glatiramer acetate when unattached to the nanoparticle in solution.

27. The pharmaceutical composition of any one of claims 1-26, wherein the nanoparticle has an average diameter of between 1 nm and 5000 nm.

28. The pharmaceutical composition of claim 27, wherein the nanoparticle has an average diameter of between 200 nm and 3000 nm.

29. The pharmaceutical composition of claim 28, wherein the nanoparticle has an average diameter of between 500 nm and 2000 nm.

30. The pharmaceutical composition of claim 27, wherein the nanoparticle has an average diameter of between 1 nm and 1000 nm.

31. The pharmaceutical composition of claim 30, wherein the nanoparticle has an average diameter of between 1 nm and 500 nm.

32. The pharmaceutical composition of claim 31, wherein the nanoparticle has an average diameter of between 10 nm and 300 nm.

33. The pharmaceutical composition of claim 32, wherein the nanoparticle has an average diameter of between 20 nm and 200 nm.

34. The pharmaceutical composition of claim 33, wherein the nanoparticle has an average diameter of between 20 nm and 150 nm.

35. The pharmaceutical composition of claim 30, wherein the nanoparticle has an average diameter of between 100 nm and 600 nm.

36. The pharmaceutical composition of claim 35, wherein the nanoparticle has an average diameter of between 200 nm and 500 nm.

37. A lyophilized pharmaceutical composition of any one of claims 1-36.

38. A process for preparing the pharmaceutical composition of claim 1 comprising
   i) forming a spontaneous microemulsion by heating to above 50°C a mixture of water, and a wax;
   ii) cooling the microemulsion to room temperature to form nanoparticles; and
   iii) contacting the nanoparticels with the peptide, the polysaccharide, or the glycoprotein to form the pharmaceutical composition.

39. The process of claim 38, wherein the wax is an organic wax having a melting point from 40°C to 60°C.

40. The process of claim 39, wherein the organic wax is stearic acid; atomized glyceryl palmitostearate; atomized glyceryl behenate; paraffin waxes having a melting point from 40° C to 60° C; a mixture of mono-, di-, and tri-glycerides obtained by esterification of fatty acids of natural origin with glycerol and having

a melting point from 40° C to 60° C; a mixture of mono-, di-, and tri-glycerides obtained by transesterification of fatty acids of natural origin and having a melting point from 40° C to 60° C; and a mixture of mono-, di-, and tri-glycerides of C12-C18 fatty acids and having a melting point from 40° C to 60° C.

41. The process of any one of claims 38-40, wherein the wax comprises a non-ionic surfactant.

42. The process of any one of claims 38-41, wherein the wax comprises an ionic surfactant.

43. The process of claim 41, wherein the wax with non-ionic surfactant is cetyl alcohol with polysorbate 60, polyoxyl 2 stearyl ether with polysorbate 80, or mono-, di-, and tri-glycerides with free polyethylene glycol and with mono-, and di-fatty acid esters of polyethylene glycol.

44. The process of claim 42, wherein the ionic surfactant is an anionic surfactant.

45. The process of claim 44, wherein the anionic surfactant is sodium lauryl sulfate, sodium cholate, sodium taurocholate, or sodium docusate.

46. The process of claim 45, wherein the anionic surfactant is sodium docusate.

47. The process of claim 42, wherein the ionic surfactant is a cationic surfactant.

48. The process of claim 47, wherein the cationic surfactant is cetyltrimethylammonium bromide, chlorhexidine salts, hexadecyl triammonium bromide, dodecyl ammonium chloride or an alkylpyridinium salt.

49. The process of any one of claims claim 38-46, wherein the peptide, the polysaccharide, or the glycoprotein has a net positive charge and the nanoparticle has a net negative charge, such that the peptide, the polysaccharide, or the glycoprotein is electrostatically attached to the nanoparticle.

50. The process of claim 49, wherein the peptide is attached to the nanoparticle, the peptide having more combined total lysine plus arginine groups than the combined total of aspartic acid plus glutamic acid groups.

51. The process of claim 49, wherein the polysaccharide is attached to the nanoparticle, the polysaccharide being gentamycin, amikacin or tobramysin.

52. The process of claim 49, wherein the peptide is glatiramer acetate.

53. The process of claim 49, wherein the peptide is interferon.

54. The process of any one of claims 38-43 or 47-48, wherein the peptide, the polysaccharide, or the glycoprotein has a net negative charge and the nanoparticle has a net positive charge, such that the peptide, the polysacharide, or the glycoprotein is electrostatically attached to the nanoparticle.

55. The process of claim 54, wherein the peptide is attached to the nanoparticle, the peptide having more combined total aspartic acid plus glutamic acid groups than lysine plus arginine groups.

56. The process of claim 54, wherein the polysaccharide is attached to the nanoparticle, the polysaccharide being heparin.

57. A method of delivering to a subject a peptide, a polysaccharide, or a glycoprotein, comprising administering to the subject the pharmaceutical composition of any one of claims 1-37.

58. The method of claims 57, wherein the administration is sublingual, orally to the stomach, orally to the small intestine, orally to the large intestine, intramuscular, subcutaneous, intra-arterial or intravenous.

59. A method of inhibiting enzymatic degradation of a peptide, a polysaccharide, or a glycoprotein upon oral ingestion of the peptide, the polysaccharide, or the glycoprotein by an animal, comprising electrostatically attaching the peptide, the polysaccharide, or the glycoprotein to a nanoparticle prior to the oral ingestion, so as to thereby inhibit enzymatic degradation of the peptide, the polysaccharide, or the glycoprotein upon oral ingestion.

60. The method of claim 59, wherein the peptide is glatiramer acetate.

61. The method of claim 59, wherein the nanoparticle comprises i) an admixture of mono-, di-, and tri-glycerides with free polyethylene glycol and with mono- and di-fatty acid esters of polyethylene glycol, and ii) sodium docusate.

62. The method of claim 59, wherein the step of electrostatically attaching the peptide, the polysaccharide, or the glycoprotein to the nanoparticle comprises

i) forming a spontaneous microemulsion by heating to above 50°C a mixture of water, and a wax;

ii) cooling the microemulsion to room temperature to form nanoparticles; and

iii) contacting the nanoparticles with the peptide, the polysaccharide, or the glycoprotein, thereby electrostatically attaching the peptide, the polysaccharide, or the glycoprotein to the nanoparticle.

63. A method of delivering to a subject a deoxyribonucleic acid molecule or a ribonucleic acid molecule, comprising administering to the subject a pharmaceutical composition comprising

the deoxyribonucleic acid molecule or the ribonucleic acid molecule attached electrostatically to a nanoparticle, and

a pharmaceutically acceptable carrier,

wherein the administration is oral or sublingual.

64. The method of claim 63, wherein the nanoparticle comprises an organic wax having a melting point from 40°C to 60°C.

65. The method of claim 64, wherein the organic wax is stearic acid; atomized glyceryl palmitostearate; atomized glyceryl behenate; a paraffin wax having a melting point from 40° C to 60° C; a mixture of mono-, di-, and tri-glycerides obtained by esterification of fatty acids of natural origin with glycerol and having a melting point from 40° C to 60° C; a mixture of mono-, di-, and tri-glycerides obtained by transesterification of fatty acids of natural origin and having a melting point from 40° C to 60° C; and a mixture of mono-, di-, and tri-glycerides of C12-C18 fatty acids and having a melting point from 40° C to 60° C.

66. The method of claim 64, wherein the organic wax is admixed with a non-ionic surfactant.

67. The method of claim 66, wherein the admixture of organic wax and non-ionic surfactant is cetyl alcohol with polysorbate 60, polyoxyl 2 stearyl ether with polysorbate 80, or mono-, di-, and tri-glycerides with free polyethylene glycol and with mono-, and di-fatty acid esters of polyethylene glycol.

68. The method of claim 63, wherein the nanoparticle comprises a cationic surfactant.

69. The method of claim 68, wherein the cationic surfactant is cetyltrimethylammonium bromide, chlorhexidine salts, hexadecyl triammonium bromide, dodecyl ammonium chloride or an alkylpyridinium salt.

70. A pharmaceutical composition prepared by the process of any one of claims 38-56.

71. A pharmaceutical composition prepared by the process of claim 52.

72. The pharmaceutical composition of any one of claims 13, 22-26, 70 or 71 comprising glatiramer acetate in an amount effective to treat an autoimmune disease or an inflammatory non-autoimmune disease in a subject, and a pharmaceutically acceptable carrier.

73. The pharmaceutical composition of any one of claims 13, 22-26, 70 or 71 comprising glatiramer acetate in an amount effective to treat multiple sclerosis in a subject, and a pharmaceutically acceptable carrier.

74. A method for treating a subject afflicted with an autoimmune disease or an inflammatory non-autoimmune disease, which comprises administering to the subject the pharmaceutical composition of claim 72.

75. A method for treating a subject afflicted with relapsing remitting multiple sclerosis which comprises administering to the subject the pharmaceutical composition of claim 73.

76. The method of any one of claims 73-75, wherein the administration is through intravenous, intraperitoneal, intramuscular, subcutaneous, oral, intranasal, buccal, vaginal, rectal, intraocular, intrathecal, topical, sublingual or intradermal routes.

77. The method of claim 76, wherein the administration is oral.

78. A method of treating a subject afflicted with relapsing remitting multiple sclerosis which comprises oral administration of a nanoparticulate formulation of glatiramer acetate, wherein the amount of glatiramer acetate in the nanoparticulate formulation is effective to alleviate a symptom of the relapsing-remitting multiple sclerosis in the subject.

79. The pharmaceutical composition of any one of claims 13, 22-26, 70 or 71 comprising glatiramer acetate for use in the treatment of an autoimmune disease.

80. The pharmaceutical composition of claim 79, wherein the autoimmune disease is multiple sclerosis.

81. The pharmaceutical composition of any one of claims 13, 22-26, 70 or 71 comprising glatiramer acetate for use as a medicament.

82. The use of the pharmaceutical composition of any one of claims 13, 22-26, 70 or 71 comprising glatiramer acetate in the manufacture of a medicament for the treatment of an inflammatory non-autoimmune disease.

83. The pharmaceutical composition of any one of claims 79-81, wherein the pharmaceutical composition is formulated for intravenous, intraperitoneal, intramuscular, subcutaneous, oral, intranasal, buccal, vaginal, rectal, intraocular, intrathecal, topical, sublingual or intradermal administration.

84. The pharmaceutical composition of claim 83, wherein the administration is oral.

85. The use of claim 82, wherein the medicament is formulated for intravenous, intraperitoneal, intramuscular, subcutaneous, oral, intranasal, buccal, vaginal, rectal, intraocular, intrathecal, topical, sublingual or intradermal administration.

86. The use of claim 85, wherein the administration is oral.

87. A nanoparticulate formulation of glatiramer acetate for use in the treatment of the relapsing-remitting multiple sclerosis.

88. A nanoparticulate formulation of glatiramer acetate for use in a medicament.